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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,399	11/14/2000	Matti Kiik	A33224-70015.0163	8464

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EXAMINER
AHMED, SHEEBA

ART UNIT	PAPER NUMBER
1773	7

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-7

Office Action Summary	Application No.	Applicant(s)	
	09/712,399	KIIK ET AL.	
	Examiner	Art Unit	
	Sheeba Ahmed	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) 1-27 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahluwalia (US. 5,965,257) in view of Meyer et al. (US 4,812,356).

Ahluwalia discloses a structural article comprising a substrate having an ionic charge coated with a coating having the same ionic charge wherein the coating consists essentially of a filler and a binder and wherein the coating does not bleed through the substrate ***(meeting the structural article limitations of claim 1)***. The substrate may be planar, coated on one or both sides with the coating ***(meeting the limitations of claims 11 and 12)*** and composed of fiberglass ***(meeting the substrate limitations of claims 15 and 16)***. The substrate is bonded together by a binder material composed of an acrylic latex and urea formaldehyde ***(meeting the limitations of claim 23)***. The binder may be acrylic ***(meeting the binder limitations of claim 15)*** and the filler may be fly ash, calcium carbonate, or ceramic micro spheres ***(meeting the filler limitations of claim 15)*** (Column 3, lines 5-55). The structural articles may further comprise a water repellent material, an anti-fungal material, an anti-bacterial material, a surface friction agent, an algaecide and/or a flame retardant material ***(meeting the limitations of claims 17-22)*** (See claims 1-19 and Column 1, lines 66-67; Column 2, lines 1-25;

Column 3, lines 52-65 and Column 4, lines 7-12). In a preferred embodiment, the article may be comprised of 10 to 25% by weight of glass fibers bonded together by 99 to 75% urea formaldehyde and 1 to 25% acrylic latex and the coating is 84 to 96% filler selected from fly ash, calcium carbonate or ceramic micro spheres and 4 to 16% acrylic binder material. The coating may further comprise SBR rubber that is crosslinked with the acrylic latex ***(meeting the limitations of claims 24-27)*** (See claims 13-16). The structural article may be of any shape and may be used in roofing applications ***(meeting the limitations of claim 14)*** and the article may be coated with conventional roofing coatings such as asphalt, modified asphalts or non-asphaltic coatings and the article may be further coated with roofing granules. Such roofing material is believed to be lighter in weight, offer better performance and fire resistance as well as better flexibility, dimensional stability and strength (Column 3, lines 34-52). Ahluwalia do not disclose that the structural article may be coated with a heat reflective element. However, Meyer et al. disclose a colored, highly elastic coating composition ***(equivalent to the elastomeric coating of claim 2)*** that may be used to coat substrates such as roofing ***(meeting the limitations of claim 10)*** (Column 1, lines 15-25). The coating comprises a colorant pigment ***(equivalent to the coloring agent of claim 3)*** (Column 2, lines 10-15) that give the coating a light and heat reflecting ability and a particular color (Column 5, lines 19-25). The coating is applied to the substrate is a thickness of at least 50 micrometers ***(equivalent to 0.05 millimeters and thus meeting the limitations of claim 13)***(Column 6, lines 53-60). Accordingly, it would have been obvious to one having ordinary skill in the art to coat the structural article disclosed by Ahluwalia with

the coating disclosed by Meyer et al. given that Ahluwalia suggest that their structural article may be coated when used in roofing applications and Meyer et al. specifically teach that their coating when applied to roofing material leads to good resistance to sea water and chemicals and protects the substrate against degradation by the action of visible or UV light (Column 2, lines 33-38). With regards to the limitations of claims 4-9, the Examiner takes the position that the solar reflectance and the visible reflectance of the heat reflective coating disclosed by Meyer et al. is inherently between 65% to 100%, given that the chemical composition of the two coatings is identical.

2. Claims 1, 2, 10-12, and 14-27 are rejected under 35 U.S.C. 103(a) as being unpatentable Ahluwalia (US. 5,965,257) in view of Davies (US 5,691,033).

Ahluwalia discloses a structural article comprising a substrate having an ionic charge coated with a coating having the same ionic charge wherein the coating consists essentially of a filler and a binder and wherein the coating does not bleed through the substrate ***(meeting the structural article limitations of claim 1)***. The substrate may be planar, coated on one or both sides with the coating ***(meeting the limitations of claims 11 and 12)*** and composed of fiberglass ***(meeting the substrate limitations of claims 15 and 16)***. The substrate is bonded together by a binder material composed of an acrylic latex and urea formaldehyde ***(meeting the limitations of claim 23)***. The binder may be acrylic ***(meeting the binder limitations of claim 15)*** and the filler may be fly ash, calcium carbonate, or ceramic micro spheres ***(meeting the filler limitations of claim 15)*** (Column 3, lines 5-55). The structural articles may further comprise a water repellent material, an anti-fungal material, an anti-bacterial material, a surface friction

agent, an algaecide and/or a flame retardant material ***(meeting the limitations of claims 17-22)*** (See claims 1-19 and Column 1, lines 66-67; Column 2, lines 1-25; Column 3, lines 52-65 and Column 4, lines 7-12). In a preferred embodiment, the article may be comprised of 10 to 25% by weight of glass fibers bonded together by 99 to 75% urea formaldehyde and 1 to 25% acrylic latex and the coating is 84 to 96% filler selected from fly ash, calcium carbonate or ceramic micro spheres and 4 to 16% acrylic binder material. The coating may further comprise SBR rubber that is crosslinked with the acrylic latex ***(meeting the limitations of claims 24-27)*** (See claims 13-16). The structural article may be of any shape and may be used in roofing applications ***(meeting the limitations of claim 14)*** and the article may be coated with conventional roofing coatings such as asphalt, modified asphalts or non-asphaltic coatings and the article may be further coated with roofing granules. Such roofing material is believed to be lighter in weight, offer better performance and fire resistance as well as better flexibility, dimensional stability and strength (Column 3, lines 34-52). Ahluwalia do not disclose that the structural article may be coated with a heat reflective element. However, Davies discloses a coating composition for coating surfaces such as roofs and containing aluminum pigment (Column 1, lines 11-15). The aluminum pigment imparts heat reflectance to the coating (Column 2, lines 10-20). The aluminum pigment may be the form of flakes ***(meeting the limitations of claim 2)*** (Column 2, lines 60-66). Accordingly, it would have been obvious to one having ordinary skill in the art to coat the structural article disclosed by Ahluwalia with the coating disclosed by Davies given that Ahluwalia suggest that their structural article may be coated when used in roofing

applications and Davies specifically teach that their coating when applied to roofing material leads water and weather resistance and heat reflection (Column 5, lines 27-35).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (703)305-0594. The examiner can normally be reached on Mon-Fri 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703)308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-5408 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5665.

Sheeba Ahmed
April 21, 2002

Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700